

When Does Competition Become Conflict? Technology, Geography, and the Offense–Defense Balance

David Blagden 

University of Exeter, UK

Abstract

Is there a meaningful offense–defense balance of technological, geographical, and human factors that substantially affects war likelihood and severity? Key contemporary policy debates are certainly infused with the notion, from the dangers of crisis instability in East Asia to the possible first-move advantages of cyber weaponry. Defensive realist theory, meanwhile, raises the possibility of inferring intent from external posture choices. Yet for offensive realists, such signaling is a doomed hope, because of aggressors' incentives to conceal their hostile intentions before turning extant military technology to offensive ends. This article suggests that both perspectives misstate the causal role of the offense–defense balance. Competition may be a general condition of international politics—but it only manifests itself as a military conflict, defined as “cold” or ultimately “hot” war, under certain conditions. Specifically, the feasibility of advancing political goals via aggression rests on prevailing military technology, taken in its geographical context—that is, offense–defense calculations. Via three sub-theoretical cases—the “stopping power of water,” conventional blitzkrieg, and nuclear counterforce innovation—the article shows that the offense–defense balance affects conflict likelihood and severity even within offensive realism, specifically by affecting deterrence prospects. But this does not mean, as defensive realism posits, that the distinguishability of defense dominance promises a route out of the security dilemma.

Extrait

Existe-t-il un équilibre significatif entre attaque et défense des facteurs technologiques, géographiques et humains qui affecte substantiellement la probabilité et la gravité des guerres? Les principaux débats politiques contemporains sont assurément imprégnés de cette notion, des dangers de l'instabilité de la crise en Asie de l'est aux possibles avantages du premier mouvement dans le cyberarmement. La théorie réaliste défensive soulève quant à elle la possibilité de déduire l'intention des choix de posture extérieure. Pourtant, pour les réalistes offensifs, un tel signal est un espoir voué à l'échec, car les agresseurs sont incités à dissimuler leurs intentions hostiles avant d'utiliser la technologie militaire existante à des fins offensives. Cet article suggère que les deux points de vue déforment le rôle causal de l'équilibre entre attaque et défense. La concurrence peut être une condition générale de politique internationale, mais elle ne se manifeste qu'en tant que conflit militaire défini comme guerre « froide » ou en définitive « chaude » sous certaines conditions. Plus précisément, la faisabilité du progrès des objectifs politiques par l'attaque repose sur la technologie militaire dominante prise dans son contexte géographique, c'est-à-dire, sur des calculs attaque/défense. Cet article s'appuie sur trois cas sous-théoriques—le « pouvoir d'arrêt de l'eau », la blitzkrieg conventionnelle

et l'innovation en contre-force nucléaire—pour montrer que l'équilibre entre attaque et défense influence la probabilité et la gravité des conflits, y compris dans le cadre du réalisme offensif, plus précisément en affectant les perspectives de dissuasion. Mais cela ne signifie pas, comme l'avance le réalisme défensif, que la distinction entre défense et domination promette une échappatoire au dilemme de la sécurité.

Resumen

¿Existe un equilibrio de ofensa-defensa significativo de los factores tecnológicos, geográficos y humanos que afecta sustancialmente a la probabilidad y la gravedad de las guerras? Los debates contemporáneos de política clave definitivamente se imbuén de la noción, desde los peligros de la inestabilidad de crisis de Asia Oriental hasta las posibles ventajas de actuar primero que otorgan las armas cibernéticas. Mientras tanto, la teoría realista defensiva plantea la posibilidad de deducir la intención de las decisiones de las posturas externas. No obstante, para los realistas ofensivos, tal señal es una esperanza condenada debido a los incentivos de los agresores para ocultar sus intenciones hostiles antes de recurrir a la tecnología militar existente para fines ofensivos. Este artículo sugiere que ambas perspectivas exponen erróneamente el rol causal del equilibrio de ofensa-defensa. La competencia puede ser una condición general de la política internacional, pero solo se manifiesta como un conflicto militar, definido como guerra "fría" o finalmente "caliente," en ciertas condiciones. Específicamente, la viabilidad de promover objetivos políticos a través de la agresión depende de la tecnología militar predominante, comprendida en su contexto geográfico, es decir, los cálculos de ofensa-defensa. A través de tres casos subteóricos (el "poder de bloqueo del agua," la guerra relámpago convencional y la innovación de la contrafuerza nuclear), el artículo demuestra que el equilibrio de ofensa-defensa afecta a la probabilidad y la gravedad de los conflictos incluso dentro del realismo ofensivo, específicamente, teniendo efecto en las posibilidades de disuasión. No obstante, esto no significa, como sugiere el realismo defensivo, que la capacidad de distinción del dominio de la defensa promete una solución para el dilema de la seguridad.

Keywords: offense–defense balance, land/sea power, nuclear weapons, realism, deterrence, security dilemma,

Mots clés: équilibre entre attaque et défense, puissance maritime, armes nucléaires, réalisme, dissuasion,

Palabras clave: equilibrio de ofensa-defensa, poder marino, armas nucleares, realismo, disuasión

The relative ease of attack and defense is a topic never far from debates on the most pressing issues of international security. Those cautioning against global nuclear disarmament fear relatively easier aggression in a world without the deterrent threat of nuclear use (e.g., Schelling 2009). Yet those warning of the dangerous temptations of *more* "useable" nuclear weapons articulate a variant of the same fear: that offensive operations, followed by the devastation of nuclear conflict, will be more likely in a world where atomic munitions appear to promise war-winning advantages (e.g., Mount 2018). The post-9/11 Iraq and Afghan campaigns have meanwhile fueled a literature on the relative advantages of insurgents and counterinsurgents, terrorists and counterterrorists, which may be thought of in offense–defense terms (e.g., Betts 2002). Worries over the escalatory possibilities of cyber conflict, and the potential crisis instability

generated by first-move advantages in the emerging US–China and NATO–Russia strategic relationships, are also essentially worries over the relative efficacy of attack versus defense (e.g., Goldstein 2013; Gompert and Libicki 2014; Cunningham and Fravel 2015; Gartzke and Lindsay 2015; Futter 2016; Shlapak and Johnson 2016; Rovner 2017; Slayton 2016/2017; Talmadge 2017; Trenin 2018; Blagden 2020).

This variable is conceptualized in international relations (IR) theory as the "offense–defense balance" (ODB): the relative ease of conducting attack and defense, given other prevailing conditions. The ODB has, in turn, been extended into variants of offense–defense theory (ODT) (Lynn-Jones 1995, 660); the effort to derive generalizable predictions for the war-proneness of the international system based on the offense–defense–favorable state of the balance *and*

observers' ability/otherwise to accurately *distinguish* the balance.

The ODB is central to wider theoretical debates in IR. For defensive realists, meaningful offense–defense differentiation is necessary if states are to infer others' intentions from their capability/posture choices (Glaser 2010, 54). Related arguments that an offensive posture can provoke balancing by causing others to infer hostile intent, but that a defensive posture can credibly signal benign intent and thereby ameliorate the security dilemma, both rely on (1) there actually being an ODB and (2) states' ability to assess the balance by differentiating between offense and defense. For offensive realists, by contrast, the premise that there *cannot* be meaningful offense–defense differentiation underpins arguments that states cannot credibly signal benign intent via posture choices, that the tragedy of mutual threat therefore cannot be escaped through such signaling/reassurance, and that states will thus always seek to maximize their relative power (Mearsheimer 2001, 30–36).¹

Of course, many scholars and analysts see little value in structural-realist subjects' intramural exchanges. But insofar as other strands of theory—neoclassical real-

ism, for instance (e.g., Ripsman, Taliaferro, and Lobell 2016)—draw from structural bases, debates over the viability/otherwise of signaling intentions through posture choices remain pivotal. Given China's ascent, Russia's resurgence, and the possible waning of systemic unipolarity, meanwhile, recent work explains why rising/declining powers engage in security competition with each other (e.g., Debs and Monteiro 2014; Montgomery 2016; Edelstein 2017; Goddard 2018; MacDonald and Parent 2018; Shiffrinson 2018)²—but for such competition to become actual conflict, at least one party must conclude that it can improve its political lot through offensive operations. Technological determinants of strategic stability are also a pressing area of current research, as new weapons proliferate.³ And most basically, *any* theoretical approach to war likelihood/severity must consider the parties' respective military forces' abilities to achieve offensive and defensive missions. As such, the ODB remains central to the biggest questions of security studies.

Despite this centrality, however, the theoretical debate over the ODB stands at an impasse. Offensive realists contend that signaling benign intent through military posture is a flawed hope for two reasons (Lieber 2005, 150–53). First, even an aggressive state may deliberately appear benign to deceive adversaries (meaning such adversaries will be unconvinced by supposedly “defensive” posture signals). Second, military capabilities are built—and can be repurposed—to serve political ends, so can be readily switched from defensive to offensive ends (rendering the notion of offense–defense “differentiation” meaningless). Defensive realists counter that variation in states' proclivity for offensive action *must* condition the likelihood of war, but that offensive realism simply assumes such variation away (Glaser 2011, 474–75).

This article therefore argues that the causal role of the ODB must be understood differently. Interstate competition is an enduring condition of international politics, given the self-help characteristics of an anarchic international system that lacks reliable law enforcement. Variation in the *severity* of such competition, meanwhile, owes to all manner of *political* causes. Such causes can be roughly demarcated between “security-seeking”

1 Defensive realism is neither wholly nor solely a theory of signaling; its core argument (Lobell 2010) is simply that preserving balanced power and eschewing avoidable conflicts more reliably maximizes states' security within anarchic systems than attempted power maximization, which can provoke/instigate costly, risky, otherwise avoidable confrontation. Nonetheless, offensive realism's claim that power maximization is synonymous with security maximization is based on uncertainty over other's intentions, incentivizing maximum relative advantage to deter/defeat others' potential future hostility (thereby making such revisionism self-fulfilling). Central to defensive realism's argument against such power maximization—that it provokes counterbalancing, thereby increasing the probability of negative consequences for the aggressor's net security—is the possibility that *not* behaving aggressively meaningfully affects whether others see that state as necessitating counterbalancing/attack. Accordingly, defensive realism requires (1) the possibility of nonaggressive intentions and (2) others' discernment of such (correctly/otherwise) resulting in less harmful counter-responses (leading to net-superior security outcomes for the restraint-exercising state). Its subordinate logics therefore require at least some possibility of meaningful intent inference/type-differentiation from observable signals.

2 Such works build on foundational contributions by Dale Copeland (2000) and Robert Gilpin (1981).

3 See, for example, special issue 42:6 of the *Journal of Strategic Studies* (2019). Some such analysis is explicitly framed in offense–defense terms, e.g., insofar as novel technological upscaling of conflict could yield different ODBs at different scalar points (Garfinkel and Dafoe 2019).

motivations (states'/citizens' desires to simply safeguard their own survival/well-being) and "greedy" motivations (other ends that states may value, such as ideological dominance, status/prestige, or additional territory/resources). This, then, represents the debate about independent variables that dominates much of IR theory, and lies beyond the scope of this paper.

Yet for any given *severity* of competition, and associated desire to be rid of competitors, the likelihood of military conflict rests on the perceived *feasibility* of achieving political goals at acceptable relative cost through successful aggression. The same goes for how bounded (or otherwise) a conflict remains once initiated, because offensive feasibility also conditions the imperative to expand/limit operations.

Rather than debating its merits/otherwise as an independent variable, therefore, the ODB must be properly understood as an *intervening* variable.⁴ It is not a reliable signal of status quo intent permitting the avoidance of dyadic security dilemmas, contra much defensive realism. But nor is it trivial, contra offensive realism. Rather, the ODB functions as a monadic conditioner of states' war-initiation/-expansion decisions. If interstate competition is a spectrum between political union and total war, via ideal-type intermediary waypoints like alliance, neutrality, "cold" war, and (limited) "hot" war, the ODB conditions the choices of states with existing aggression incentives—derived from whatever political cause—over whether to move toward increased belligerence. "Monadic" thus means not a route out of (dyadic) competition between actors, since the ODB is not a reliable tool of interstate intent signaling, but simply a determinant of *individual* states' choices over whether—and how extensively—to fight.⁵

As such, the ODB does not promise its own theory of war/peace, since it is not a generalizable *cause* of conflict. Rather, it is a convergence of factors—specifically, physical and human technologies interacting with geographical context—that condition whether either side decides that it has sufficient prospects of advancing political goals through initiating/expanding war in a given moment for it to be worth the costs. In this, it goes beyond aggregate power (proxied by underlying net economic

wherewithal).⁶ However, it cannot be parsed out from the balance of military capabilities, for "capability" itself *means* a context-dependent ability to complete a given mission in a particular techno-geographical situation. This relationship to the military balance does not preclude analyzing the ODB in its own right, which would conflate inputs with outputs: relative military capability to accomplish a given mission in a given geographical location at a given moment will always be some function of both aggregate resources *and* the geography-technology interaction. So, just as we can study the balance of power (i.e., available economic wherewithal) as an input to relative military capability, so too we can identify technological variables—taken in geographical context—that also input to relative military capability.

How can we test this argument? Using empirical cases to explore the causes of nonoccurrences is prone to selection bias (Achen and Snidal 1989). Any case of an observed "hot" war is necessarily a case where offense-defense conditions were sufficiently conducive for at least one side to gamble on violence.

Instead, therefore, this article supports its argument through a form of empirically illustrated intellectual history. Specifically, it takes three sub-theories of offensive realism—the paradigm that dismisses the ODB as strategically indistinguishable and operationally nonexistent—and shows that they are in fact instances of the ODB intervening between conflict incentives and war initiation. Those sub-theories are (1) the "stopping power of water" (SPoW) as an obstacle to extra-regional hegemony, (2) the conditions for conventional blitzkrieg as a facilitator of intra-regional hegemony, and (3) counterforce innovation as an explanation of continued power-seeking even in the presence of nuclear deterrence. The implication is that even among perspectives that dismiss the ODB as an independent variable, political causes of interstate *competition* are only manifested as actual *conflict* when the ODB as intervening variable is conducive.

The article first reviews prior conceptualizations of the ODB and ODT. Second, it lays out the offensive realist critique of ODT that questions the ODB's utility. Third, it recasts the ODB as an intervening variable determining whether the aggression incentives produced by interstate competition are manifested as actual conflict. Fourth, it illustrates its argument using the three cases

4 Explicitly treating the ODB as an independent causal variable are (among others): Glaser (2010, 43–46), Van Evera (1999, 117–92), and Walt (1987, 24–25).

5 For an argument similarly based on unpacking oft-observed differences between supposedly *dyadic* interactions and individual states' actual (*monadic*) war-initiation decisions, see Rosato (2005, 467).

6 Power-as-resources must be understood in net (not gross) terms, since for any given resource base, the total resource available for any given policy purpose will depend on other political, economic, and social demands (Beckley 2018, 2).

noted above. The article concludes with implications for theory and policy.

What is the Offense-Defense Balance?

The ODB refers to the relative ease of conducting interstate attack and defense, given other prevailing conditions (Lieber 2005, 27). Beyond this basic conceptualization, however, various offense–defense theorists define the balance slightly differently. One approach thinks of the ODB as a ratio, $Y:X$; that is, the resource (Y) an attacker must invest in offensive capabilities to overcome the resource (X) a defender invests in defensive capabilities.⁷ A larger ratio denotes a balance more favorable to the defense and makes offensive operations more costly. ODT literature predominantly locates such ratios in conventional land warfare (e.g., force ratios needed to seize/hold territory), but the insight can be extrapolated to other salient domains (imperatives to attack/defend also exist at sea, in the air/space, and—with some specificities—among cyber/nuclear forces).

This plausible-but-abstract ratio-based operationalization has been criticized as inherently unmeasurable, however; such refinements distinguish balance-as-cause (i.e., theorizing the ODB's impact on international politics) from balance-as-effect (i.e., adequately describing the factors underlying the ODB itself) (Biddle 2001, 744–45, 749 (n. 12); Lieber 2005, 28). Accordingly, such approaches focus on more “concrete” measures of the ODB, such as the number of attacker casualties per defender or per unit of territory conquered (Biddle 2001, 748–49).⁸ Nonetheless, all offense–defense theories attempt to provide analytical rationales for a common-sense intuition: namely, that the relative ease of conducting a successful offensive *must* affect war-initiation/expansion decisions.

Further disagreement exists over whether the ODB should be defined in its “core” or “broad” senses. Proponents of the former reason that the ODB must be thought of solely in terms of the specific impact of new *technological* innovations that may differentially favor attackers or defenders. Generally, offense–defense theorists have agreed that *mobility*-promoting technologies favor offense while *firepower*-promoting technologies favor defense (Lynn-Jones 1995, 666–68; Qvester 2003

[1977], 2; Lieber 2000, 78; 2005, 35–45): to fight abroad, attackers must be mobile; to repel attackers, defenders need firepower. This mobility-versus-firepower approach to the ODB has faced fundamental criticism, as discussed subsequently. At this stage, however, the salient point is that advocates of “core” ODT resist widening to underlying factors besides technology for three reasons (Lieber 2005, 33). First, technology is the one factor common to all ODT and is—according to this position—the balance's most important and parsimonious feature. Second, for “core” proponents, technology is the only systemic variable, since other factors (such as geography) are context-specific and therefore have little generalizable explanatory power. Third, “core” proponents contend that broader conceptualizations of the balance ultimately render ODT atheoretical and unfalsifiable, since it becomes an ad-hoc “kitchen-sink” of variables with unstable explanatory significance.

In contrast to such parsimonious conceptualizations, broader understandings of the ODB argue that in addition to technology, there are also significant explanatory roles for geography, force size, diplomacy, domestic politics, and the cumulativeness/otherwise of resources (Jervis 1978, 194–99; Hopf 1991, 476–78; Glaser and Kaufmann 1998, 61–68; Van Evera 1999, 160–66).⁹ Again, the logic is that some factors—such as resource cumulativeness as an offensive progresses—differentially benefit attackers, whereas others—such as geographical obstacles—differentially favor defenders.¹⁰ Among these “broad” offense–defense theorists, some argue in favor of the inclusion of human factors such as force employment and doctrine, on the grounds that thinking in terms of technological and geographical variables without reference to the people that actually make wars loses

7 Using the ratio approach to the offense–defense balance are Jervis (1978, 188); Gilpin (1981, 62); Glaser (1994/1995, 61); Lynn-Jones (1995, 665); Glaser and Kaufmann (1998, 50–51).

8 This is essentially a form of strategic net assessment (Glaser 2010, 140).

9 Geography and offensive capability—alongside aggregate resources and aggressive intentions—also feature in Stephen Walt's (1987) balance-of-threat theory. An alternative framing codes such variables as “structural modifiers” within defensive realism (Taliaferro 2000/2001, 136–41). Note that Lieber (2005, 192 (n.10)) codes Jervis as a “core” offense–defense theorist, since he sees technology as central in determining security dilemma severity. However, given that Jervis recognizes—like this article—that technology only carries offensive/defensive implications in geographical context, his approach is better understood as “broad” ODT.

10 “Ease” of attack is relative; it is rarely easier in “absolute” terms to conquer than defend, but *relative* difficulty can vary (Van Evera 1998, 5 (n.1)).

too much explanatory power (Van Evera 1999, 162; Biddle 2001, 746).¹¹ Others argue against including human factors, on the grounds that ODT must assume that states act “optimally”—given the technology and geography available—if it is to remain a systemic theory of international politics rather than a unit-level theory of military effectiveness (Glaser and Kaufmann 1998, 55–57). Either way, proponents of the broad approach to the ODB agree that, while using more factors than the state of prevailing military technology undoubtedly reduces conceptual parsimony, it is nonetheless necessary given the impact of non-technological factors on states’ assessment of their prospects for military success (Glaser and Kaufmann 1998, 60–61).¹²

Further contention exists over the correct analytical level—strategic, operational, or tactical—for assessing the ODB’s role (Lieber 2005, 27). Insofar as it purports to explain macro-level international political outcomes, the most obvious focus of offense–defense theories must be the grand strategic level (Glaser and Kaufmann 1998, 54–55). Yet critics of ODT’s overall explanatory power reason that because it is ultimately about military outcomes/potential, it must be tested practically as a theory of operational military effectiveness; after all, potential war initiators are unlikely to attack if they expect to be unsuccessful in their very first operation (Lieber 2005, 27). Relatedly, Shing Tang (2010, 230) demarcates “objective” and “subjective” understandings of the ODB. For while the former (if it exists) may affect war *outcomes*, it will be the latter—states’ *perceptions* of the relative ease of attack/defense—that conditions their war-initiation/-expansion *choices*.

Despite these areas of disagreement, certain themes unify pre-existing offense–defense research. The first is that the ODB must be treated as a continuous rather than dichotomous variable, given that “relative ease” of attack will always be a matter of degree (Lieber 2005, 28). Second, there is consensus that it must be considered a distinct variable from power or skill in determining military and thus international-political outcomes (Lieber 2005, 28–29). For proponents, the ODB is a third variable that can sometimes be “overwhelmed” by sufficiently imbal-

anced aggregate resources and/or skill; for critics, the ODB is essentially irrelevant to international outcomes that are ultimately results of balance-of-power strategic imperatives.¹³ As noted in the introduction, however, this article argues that while demarcating the ODB from latent power may be justifiable, separating the balance from *capability*—a compound, contextually dependent variable that is *produced* by other inputs—is more problematic. Such false separation accounts for much of the misdirected debate over whether the ODB is an independent “cause” of war.

Challenging ODT: “Guns Don’t Kill People, [Policymakers] Do”

In his foundational statement of ODT, Robert Jervis identifies that the implications for war causation depend on two related-but-distinct components: the ODB itself, and offense–defense differentiation (Jervis 1978, 187–94, 199–206).¹⁴ That is, to ameliorate security dilemmas by privileging defense over offense, the ODB not only has to *exist*, but strategists must also be able to *distinguish*—at least for military postures, if not for particular weapons (Tang 2010, 228)—whether offense or defense has the advantage.¹⁵ Such distinguishability would enable pairs of defensively inclined states to break out

11 Tang (2010, 228) helpfully demarcates *weapons* from *posture*; the former—as technology alone—may entail no meaningful ODB, but the latter—through its incorporation of human agency—gives that technology purpose (thus permitting meaningful offense–defense differentiation).

12 For the argument that factors promoting deterrence should be considered as a separate category from offense and defense, see Adams (2003/04, 48–50).

13 For the former, see Glaser and Kaufmann (1998, 48–49). On the latter, see Lieber (2005, 4–7).

14 See also Glaser and Kaufmann (1998, 47). Jervis did not “invent” ODT—the intuition exists in prior works (Van Evera 1999, 120 (n.1))—but he bears credit for its systematization.

15 Glaser and Kaufmann (1998, 79–80) contend that the ODB can be measured even when *not* distinguishable. Even if they are correct, however, the absence of offense–defense differentiation would preclude hypothetical signaling of benign intent by even a defense-favorable ODB, since the very characteristic that makes the ODB measurable absent meaningful offense–defense differentiation (on their telling)—that distinguishability and the balance itself are non-identical—would *also* mean that states could draw no clear conclusions about others’ offensive/defensive posture choices (or the underlying intentions) from given ODB configurations. Accordingly, the possibility of measurability in the absence of distinguishability does not undermine the point that signaling benign intent—and thus ODB-enabled escape from security dilemmas—would only be possible under conditions of meaningful offense–defense differentiation (at least among postures, if not among weapons: Tang (2010, 228)).

of their mutual security dilemma by foregoing offensive military options: a costly signal of benign intent (Glaser 2010, 63–68). Early criticisms of ODT therefore revolved around the fact that the offensive and defensive qualities of new technological innovations are hard to measure and ultimately indistinguishable (Mearsheimer 1983, 24–27; Levy 1984, 219–38; Lynn-Jones 1995, 672–82; Davis Jr. et al. 1998/1999, 180; Mearsheimer 2001, 417 (n. 28)). If offense and defense are indeed indistinguishable, then the prospects for escaping the security dilemma are bleak, as offensive realists contend.

An alternative, related criticism of ODT is that it simply lacks explanatory power in a world where people, not weapons, ultimately wage war (Gray 1975; 1993). On this logic, there are more compelling explanations for why war breaks out, be they “greedy” revisionism or merely “security-seeking” self-preservation (Lynn-Jones 1995, 683–87). Such critics see technology as essentially offense–defense neutral, insofar as states with sufficient motives to risk war will generally find the means to do so, regardless of prevailing military hardware (Shimshoni 1990/1991; Betts 1999). Extending the logic, meanwhile, such positions contend that states shape their military capabilities—including the underlying technology—to advance policy goals, not the other way around.

Keir Lieber’s offensive realist critique of ODT fuses these two positions. First, he dismantles the idea of promoting firepower and eschewing mobility in military technology as a route to defense advantage (and subsequent peace). At the theoretical level, there are plausible counterarguments to the firepower/mobility reasoning (Lieber 2000, 78–81). An attacker certainly requires mobility to concentrate forces, achieve breakthrough, and exploit such breakthroughs. Yet defenders also require mobility to reinforce threatened points, exhaust opponents through trading space for time, and effectively counterattack to recover losses. Likewise, defenders need firepower to slow an attacker’s advance sufficiently to reinforce threatened points, and to ensure sufficient attrition of attacking forces to make defense-in-depth effective. Yet attackers also require firepower to break through defenses before reinforcements arrive, to suppress defenders attempting to suppress their own advance, and to hinder the retreat of mobile defenders attempting to pursue defense-in-depth. If there is no such thing as meaningfully offense/defense distinguishable military technology, Lieber concludes, then the ODB cannot play a significant role in either actual military outcomes or

policymakers’ calculations of whether to initiate war (Lieber 2000, 103–4; 2005, 150–53; 2011).

Second, Lieber finds that in three crucial cases of outright great-power aggression often associated with the “failure” of offense–defense distinguishability—Prussia during the 1864–1871 unification wars, Imperial Germany in 1914, and Nazi Germany in 1939—the decision to attack resulted from a politically motivated determination to improve the state’s relative power position. In other words, strategists judged that they could improve their state’s long-term situation by defeating regional rivals and employed prevailing military technology accordingly (as well as developing military technology/doctrine/plans to further their strategic aims). They did *not* fight simply as a result of a technology-induced unwanted spiral of move and countermove (Lieber 2000, 81–96, 103–4; 2005, 46–122, 152–53). Furthermore, states frequently judged aggression a prudent policy choice—despite the heavy anticipated costs of fighting and nontrivial risks of failure—given the pressures of an anarchic international system (Lieber 2007, 190–91).

Accordingly, Lieber (2005, 4–7, 155–58) concludes that a more appropriate framing of technology’s impact on strategic outcomes is “technological opportunism.” On this logic, states seize *any* technological development—even those with purportedly defensive *raison d’être*s—as potential opportunities to pursue offensive objectives (Lieber 2005, 5); after all, even static fortifications free-up forces for aggression elsewhere. He therefore reasons that technological opportunism is a supportive microlevel component of offensive realism, insofar as states that are “primed for offense” seek to grab power whenever possible.¹⁶ Technological opportunism views *military* outcomes as a product of the balance of power, not the balance of technology, and *political* outcomes as a product of the aggression incentives produced by uncertainty over other states’ intentions endemic in the anarchic international system (Lieber 2005, 5–6). Crucially, moreover, if military technology is not meaningfully distinguishable, then prospects for escaping interstate security dilemmas by signaling benign intent are bleak: even in situations where different technologies may have marginally different utility in attack and defense, the incentives for

For recent debate, see Lieber (2011) versus Glaser (2011, 483–87).

16 For offensive realists’ reasoning that all major states are offensively primed and seldom pass-up opportunities to gain power at rivals’ expense, see Mearsheimer (2001, 30–36). Lieber (2005, 157) argues that technological opportunism explicates micro-foundations already implicit in offensive realism.

potential aggressors to conceal their hostile intentions—and the risk that a defensively minded state today may turn offensively inclined in future—would render such attempted signaling non-credible (Copeland 2011).¹⁷

Recasting the ODB: *Must War Find a Way?*

Rejecting the compelling core intuition of offense-defense analysis—that the relative ease of attack/defense *must* condition states' war-initiation/-expansion decisions—would be absurd. Yet variants of ODT, as it has previously been contested, risk obscuring that core intuition. The effort to treat the ODB as a systemic variable, and thus an independent *cause* of war, therefore explains the observed theoretical impasse over conceptualization of the ODB, even as productive *application* of the ODB in policy debates continues apace.¹⁸

"Relative ease" is necessarily contextual; assessing the ease of attempting anything outside the context in which it might be attempted would be nonsensical. And for there to even *be* a context in which the relative ease of attack/defense is under consideration, *incentives* for conflict must come from elsewhere. Nonetheless, for those with such incentives to conclude that it is worth initiating/expanding conflict, they must estimate that the benefits outweigh the costs. That does not mean that such costs/benefits must be certain *ex ante*—impossible in an interactive domain of human contingency—or dispute that for states to contemplate the initiation/expansion of war, they must perceive potentially grievous down-

sides to the *status quo ante* and/or substantial up-sides to escalation.¹⁹ Still, for any given level of such independent variables, the relative ease—understood in expected-value terms—of advancing political goals through aggression versus continuing to trust in deterrence/defense conditions the attractiveness of war initiation/expansion.

If "relative ease" is necessarily case-contextual, then the ODB is necessarily a product of the interaction between technology and geography. Technology—understood broadly, as discussed below—provides the useable tactical means that enable certain operational ways to advance given strategic ends. Geography provides the environment in which technology operates. Aggregate power resources, meanwhile—the underlying economic wherewithal to procure/supply forces—determine the *amount* of technology that can be procured. But for any given *level* of such resources, the relative ease of attack/defense (i.e., the ODB) may vary—and the interaction between technology and geography explains such variance.²⁰

Such a punchline can be further specified in two key ways. First, while technology is the variable that elevates humans' combat capability above merely their curled fists, geography provides the physical context in which technology operates. For starters, geography both changes and can be caused to do so: water freezes/melts, cities sprawl/shrink, resources are discovered/exhausted,

17 This does not preclude *other*, potentially effective methods of intent signaling; it simply means that offensiveness/defensiveness of military posture is an unreliable vector for doing so (Kydd 1997, 128–47).

18 Whether "ODT" remains meaningful terminology—even recognizing that the ODB is *not* an independent cause of war—largely rests on semantic preference. There might be useful offense-defense theories, i.e., constructive applications of the relative ease of attack/defense to explanations of conflict, even accepting the core argument that the ODB is merely an intervening (not independent) variable, just as IR has numerous democratic peace theories (rather than some monolithic "DPT"). Fundamentally, however, for ODB variation to function as an independent *cause* of conflict/peace—i.e., to stand as an IR theory of peace-through-signaling, as an alternative to predictions of intractable security dilemmas—it must promise the *differentiation* of offensive/defensive intentions. And as argued, the ODB does not reliably deliver such credible signals.

19 The level of upside/downside needed to motivate such decisions obviously depends on multiple factors, including relative capability/resolve and leaders'/societies' risk tolerance.

20 As noted earlier, prior "broad" offense-defense scholars have also included such variables as domestic political cohesion and diplomatic choices in their ODB conceptualizations (1998 Van Evera 1998, 1999, 163–66). However, while diplomatic *faits accomplis* can be central to the escalation of crises that produce/intensify aggression incentives—and while domestic political variables can affect (1) strategic efficacy, including choices to use/forego aggression, and (2) states' resolve/capacity to fight once strategy mandates it—this article's argument is about offensive feasibility *ceteris paribus*. Accordingly, the analysis here covers the feasibility of offensive operations for some level of aggression incentives, whereas domestic politics and diplomacy are sources of the motives that *generate* such incentives (although they obviously also affect the variables that *are* of concern here, notably human choices to utilize geography by developing/employing technology).

etc. But beyond its *own* variance, geography also causes technology's relative *salience* to vary too. The military technology of the Cold War USA was less useful in Vietnamese jungles than it presumably would have been in Central Europe. Yet those jungles may have been less of an obstacle to offensive operations in the era of ubiquitous thermal-imaging cameras. Such thermal-imaging cameras do not necessarily offer the same utility in open-ocean naval operations that they might in close-quarters counterinsurgency, meanwhile—but then, oceans have become lesser obstacles to power projection through technological progress (whereas Vietnam's jungles remained stubbornly opaque to a state intent on pacifying their inhabitants, its maritime power-projection capabilities notwithstanding). While the Wehrmacht crossed land borders and seized France with relative ease, it could not do the same across the English Channel absent other techno-geographical conditions—just as Nelson's Royal Navy, for all its sea control, was of little use for directly assaulting Napoleon's Paris.²¹ And combining these two axes of variance, a change in geography, as posited above—say, the ongoing thawing of the Northeast Passage—may be both *caused* by technology (e.g., carbon emissions) and *exploited* via technology (e.g., ice-hardened ships). Ultimately, assessing the offense–defense properties of technology absent the geographical context of its use is meaningless.²²

- 21 Of course, the Wehrmacht's successes on land created more favorable conditions for German contestation of UK sea/air control, just as British successes at sea ultimately facilitated a sufficiently favorable agglomeration of ground forces to defeat territorial France. Nothing about the techno-geographical interaction in specific operational domains precludes relative capability in such domains from contributing to overall strategic efficacy.
- 22 Geographic proximity is also itself an input to threat calculations, of course (Walt 1987, esp. 23–24; Starr 2005), because—controlling for power, which diminishes with projection range (Boulding 1962, 230–31, 245–47)—neighboring/proximate states most immediately affect a state's external environment and will therefore be the principal targets of its foreign policy (giving them reason to fear its potential future intentions, and vice versa). The desire/need for scarce (and necessarily geographical) resources can also motivate conflict. Nonetheless, the focus here is the (techno-geographical) ODB's impact on the feasibility of successful offense for some given level of aggression incentives; this recognizes that such incentives have numerous potential sources, some of which will be conditioned/

Second, “technology” is not merely physical stuff. Physical “stuff”—the microchip, the steam engine, the wheel—is merely an observable manifestation of underlying *human* technology, defined as people's knowledge of how to maximize the productive output of their inputted labor (Solow 1956; Becker 1993). “Technology” must therefore not only be understood in its geographical context; it also necessarily covers the human qualities that determine physical technology's creation and employment, and that prior ODT has attempted to parse out from the technological ODB (as “skill”).²³ Such demarcation is certainly parsimonious, but it also parses and discards the valuable “relative ease” intuition from ODT, for technology cannot exist without reference to the knowledge frontier of the humans who make/use it. Any level of tactical proficiency (say) necessarily requires some level of technological employment, just as any employment of technology necessarily requires some level of (human) tactical proficiency—and all while technology is itself created and (re-)deployed to serve human ends. It may be neater to separate the two, in short. But again, it would also be meaningless.

The relative ease of attack and defense can thus *only* be adequately explained if technology is (1) considered in geographical context and (2) understood as a compound of the human knowledge that creates/employs it *and* such knowledge's constructed physical manifestations. Contemplating the interaction of technology in its geographic and human contexts is necessarily nonsystemic and thus not a generalizable independent variable, contra the aspirations of systemic ODT.²⁴ However, that does not preclude the ODB being a crucial intervening variable that conditions whether the aggression incentives produced by other political causes are manifested as actual fighting, i.e., when and where competition escalates into conflict. Furthermore, it does not preclude a particular techno-geographical interstate context *taking on* systemic importance when the interstate relationship *itself* is of systemic importance; the relative ease of US–Soviet attack

intensified by geography, but that still does not make the ODB itself the *cause* of the underlying hostility.

- 23 These include individual initiative, tactical proficiency, operational efficacy, strategic aptitude, force cohesion, political objectives, and all other variables that determine technology's employment, along with the creation/development of technology itself.
- 24 Sean Lynn-Jones (1995, 668), for example, reasons that such non-systemic variables cannot play a role in an aspiring systemic theory of war causation.

and defense was contextual, yes, but also highly consequential for system-level international politics throughout the Cold War.

The ODB can be understood, then, as one of two crucial inputs to military capability, alongside aggregate power (understood as the economic wherewithal to procure/supply forces). Capability, too, is necessarily contextual. For despite often being used as simply synonymous with forces' quantitative size and qualitative sophistication, "capability" means the ability of an actor to bring about a particular effect. The United States of the 1960s–1970s had large, sophisticated military forces, but they were *incapable* of pacifying Vietnam at acceptable relative cost; the interaction of physical technology, human knowledge, and geographical terrain (i.e., the ODB) meant US power resources were insufficient to deliver success against a much less well-resourced adversary. The ODB—technology (human and physical) interacting with geography—is thus a crucial determinant of whether states are capable of achieving political goals at acceptable relative cost through offensive action. Accordingly, it is an important intervening variable in determining whether the aggression incentives born of international competition manifest themselves as the initiation/expansion of conflict, even though the relative ease of attack/defense is obviously not itself the source of such incentives.

Taken together, the implications for war causation are more nuanced than much of the ODT debate has previously acknowledged. The ODB does not *cause* interstate competition. The causes of such competition—and the aggression incentives it yields—are necessarily political,²⁵ be they "greedy" ends or merely security-seeking imperatives.²⁶ The intensity of such incentives, moreover,

varies in line with the intensity of the underlying political causes. But states' calculations of whether to *act* upon any given *level* of such incentives will be conditioned by their assessment of their prospects for achieving political goals through offensive military action at acceptable relative cost versus their prospects for securing such goals without aggression. It is this calculation that the relative ease of attack versus defense (the ODB)—a contextual product of technology and geography—informs.²⁷ The ODB can therefore be inimical to war initiation even by states with strong aggression incentives, just as it can be conducive to war initiation by states with lower aggression incentives.²⁸

Of course, if either side assesses that striking first delivers meaningful advantages and/or that waiting to move second delivers significant *disadvantages*—both of which are affected by techno-geographical circumstances—then that raises the perceived relative benefits of initiating aggression (via the associated relative risks of not doing). Accordingly, the ODB as intervening variable can still affect the attractiveness of security-motivated revisionism (i.e., where a state's security-seeking motives beget expansionist intentions)—not least because, under such first-strike-advantageous conditions, refraining from first-movement is correspondingly more dangerous. One manifestation is increased crisis instability: escalation/expansion during

that most states would like more valued goods—power, wealth, prestige, ideological dominance, and so forth—if sufficiently low-cost opportunities for their acquisition are present, but "the rub is what constitutes an opportunity." Underpinning this "greed"/"security" elision is the material scarcity of the international system; material resources are necessary for both states' security *and* their other political/economic/ideological (i.e., "greedy") goals (Hamilton and Rathbun 2013). Nonetheless, as a heuristic for demarcating *varieties* of motives, the typology is useful.

25 War being the violent extension of politics (Clausewitz 1989 [1832], 87).

26 "Greedy" versus "security-seeking" (motive) is more useful here than "revisionist" versus "status-quo" (behavior) because it is possible to pursue revisionist strategy for security-seeking reasons, just as it is possible to maintain status quo strategy while holding "greedy" underlying motives (Glaser 2010, 3–4). That said, "greedy" versus "security-seeker" as binary categories are themselves problematic, because motives interact with relative cost; practically all states will be "greedy"—seeking somehow improved lots—if the costs are low enough, while practically all states will be content to merely safeguard their existing lot if the price of further "greed" is high enough (Jervis 2001, 39). As Jack Snyder notes (Snyder and Lieber 2008, 182), both offensive and defensive realists can agree

27 This broadly aligns with Glaser's (2010, 137–43) conceptualization of the ODB, though he maintains that even an indistinguishable ODB can nevertheless signal motives (see footnote 15).

28 As Evan Montgomery (2006) identifies, a defense-favorable ODB may render offensive operations infeasible (at acceptable relative cost) even for revisionist states that prefer aggression. Such ODB-based preclusion of offensive operations may not have mitigated the dyadic security dilemma—each side still has reason to harm the other—but it still intervenes between the presence of interstate *competition* and the initiation of actual *conflict*.

interstate confrontations offers superior cost–benefit payoffs—because of the techno-geographical advantages of moving first and/or disadvantages of moving second—compared to refraining from aggression and relying on deterrence/defense. Crucially, however, this is still not the ODB *creating* the aggression incentives that brought about the confrontation itself; rather, it modifies the policy *choices* that follow *from* such underlying causes.²⁹ Moreover, it allows constructive *utilization* of the (contextual) ODB: not by signaling benign motives/intentions to allay *others'* fears, which remains difficult for the reasons discussed, but by configuring the state's *own* forces to reduce both sides' first-move advantages, thereby bolstering deterrence and reducing crisis instability.

This conclusion further elucidates how the ODB exerts influence. In defensive realist ODT, signaling—to which the ODB can supposedly contribute—is a *dyadic* interaction; if a pair of states can *mutually* reassure each other of non-revisionist intentions, through the costly signals of force posture, then the security dilemma can be ameliorated. Offensive realists target this dyadic logic, arguing that even revisionist states have incentives to project non-revisionist appearances, rendering such signals non-credible. If the war-initiation/-expansion decision of either party in a given time/place depends on their assessment of their *own* capability to advance their goals through aggression, however, then that is merely a *monadic* logic (it does *not* depend on dyadic interaction). Escaping the security dilemma through signaling benign

intent may indeed be challenging, therefore, given aggressors' incentives to conceal and defenders' associated reasons to disbelieve (Jervis 2011, 420).³⁰ If military “technology” can only meaningfully be understood as a human–physical compound, moreover, as argued above, then issuing, reading, and trusting such signals will be harder still. For while onlookers may estimate the offensive/defensive utility of observable physical technology with some accuracy, attempting to assess the future *employment* (and further development) of such technology from outside is effectively impossible.³¹ Yet

29 This *could* still be framed semantically as arguing that the incentives *themselves* have been changed (the imperative to act may be more/less acute)—but that would imprecisely elide causation (since the *incentives* are at a level set by political relations, while *choices* taken to *serve* such incentives are determined by the feasibility of achieving political ends at acceptable relative cost through offensive/defensive ways/means). Relatedly, James Fearon (2018, 541–48) observes that offense-favorable ODB shifts could increase the force-size necessary to preserve deterrence, thereby intensifying the dangers of relative power inferiority. Striving for relative advantage (to avoid such relative disadvantage)—and belief in its obtainability, either through one side's guile/investment and/or the other's inability to countermatch such guile/investment adequately/quickly enough—is thus a component of ODB influence on the costs/benefits of moving first/second. Yet again, this is not the ODB *causing* aggression incentives; offense-advantage simply makes their enactment more likely.

30 This does not preclude *other* bases for interstate trust, beyond postural signaling, e.g., embedded “friendships” of intersubjective recognition—although such bases are fragile (Blagden 2018). This article's recasting of the ODB's causal role recognizes that international politics produces substantial variation in intensity of interstate competition and associated aggression incentives, in sum, but that does not simultaneously make the ODB a useful vector for signaling such variation.

31 There is a notable exception. If a state presently has *no* forces that can be brought to bear—which may mean literally none, or merely forces so relatively weak as to lack offensive utility—then this may still convey no information about motives. But it necessarily signals no ability (and thus no intention) to attack within some given period. Most basically, a state without military forces—a consequence of initial non-armament *or* subsequent disarmament—conveys an intention not to attack within the time period required to recruit/train/equip such forces. More specifically, an island state that possesses no boats/aircraft conveys its inability to attack until it has built the requisite shipping, just as a state with no forces inside (say) twenty-four hours' range conveys that it cannot attack in the next day. Balances of capability and posture thus collapse together here: a state with no deployable forces has a (necessarily) non-offensive posture, but it also lacks manifested capability—understood as forces deployable in a particular time-bound context—altogether (even if it has substantial capabilities elsewhere and/or latent resources for their generation). Such capability forbearance could certainly be a credible signal of nonaggressive intent *over a given time horizon*; a state could be reassured that its potential adversary does not intend to attack within a particular future period—and can configure its own posture accordingly—simply because such attack is not *possible*. Crucially, however, this still conveys no information about the greediness/otherwise of each side's motives, and no such time horizon can be infinite (because any such

states' calculations of their *own* capabilities to achieve political ends through armed force are *not* dyadic interactions dependent on trusting others' signaled intent. Rather, they are decisions taken *within* a single state—at the monadic level—demonstrating how the ODB can influence war-initiation/-expansion choices *without* credible interstate signaling.³² In this, such calculations are necessarily filtered through policymakers' perceptions.³³ However, such recognition of cognitive filtration

forbearance can be reversed over time via sufficient resource investment); the *precise* time horizon can also never be certified *ex ante*. Furthermore, such forbearance is costly; having *no* forces that you can bring to bear at a given place within a given time *also* means that there is nothing you can do to counter your adversary's aggression if *they* turn revisionist at that place within that time. Accordingly, such "signals" may be (temporarily) credible, but they are also perilous—and thus unappealing in the very situations of mutual threat that such signals are intended to escape (Montgomery 2006, 153)—as well as unrevealing of motives (and thereby unlikely to mitigate security dilemmas based on uncertainty over others' future uses of their relative power (Copeland 2011)).

- 32 Such monadic choices are informed by salient dyadic *balances*, obviously, insofar as a state assessing its prospects for successful offense/defense must estimate the capabilities of the prospective adversary that it would seek success against. But this does not require/entail inferences about adversary *motive*.
- 33 See, foundationally, Jervis (2017 [1976]). In essence, the ODB can be understood on "objective" and "perceptual" levels. Neither the acceptance of (objective) defense-advantageous conditions nor signaling via (objective) defense-favorable "hand-tying" may be sufficient to mitigate potential security dilemmas, as per earlier discussion. But (perceptual) assessments of whether achieving political goals at acceptable relative cost via offensive operations is feasible necessarily condition war initiation/expansion decisions. Such perceptual assessments may misjudge subsequent manifested conditions—consider certain World War I strategists' belief that defenders' tactical advantages could be overcome through astute maneuverist plans to render offensive preferences feasible, even while recognizing that such a war would likely be costly and could well become protracted (Lieber 2007; Snyder and Lieber 2008)—but material circumstances nonetheless underpin subjective estimates.

does not preclude a "real" ODB, with a material base, informing such calculations.³⁴

Figure 1 summarizes these two competing ways of understanding the ODB. In figure 1(a), the ODB is an independent variable. This is the approach of defensive realist ODT, yet as discussed, issuing/receiving reliable intent signals via the operationally contextual ODB is no mean undertaking. In figure 1(b), by contrast, the ODB is an intervening variable (or "mediator"); aggression *incentives* come from elsewhere in politics, but the relative ease of advancing interests through offensive action in a given technogeographical context conditions states' decisions over whether to *act* on those incentives by initiating and/or expanding conflict.³⁵

Extending this approach, meanwhile, note that—while the ODB is often illustrated via the relative ease of attacking/defending *territory*, reflecting its early theorization during the Cold War and abundant cases drawn from pre-1945 European conflict—the "relative ease" insight is more broadly applicable. Certainly, if it *were* solely relevant to territorial conquest, then its applicability to contemporary IR would be limited, given that nuclear weapons and knowledge-based economies have diverted major-power politics into a broader range of coercion/deterrence relations than the sovereignty-threatening ground offensive (Brooks 2005; Schweller 2011). Yet as the examples in this article's first paragraph illustrate, the relative ease of attack/defense applies across domains and through time: between Nelson's battleships and Napoleon's shore batteries (Blagden, Levy, and Thompson 2011, 194), between America's supercarriers and China's anti-surface forces (Montgomery 2014), between those who hack and those who harden in cyberspace (Gartzke and Lindsay 2015), between those who seek nuclear survivability in the ocean's depths and those who hunt their submarines (Long and Green 2015, 47–51). It is also not solely an

- 34 Tang (2010) contends that while there is no "objective" ODB of weapons, there is nonetheless a "subjective" ODB of *postures*. But techno-geographical feasibility, as described here—i.e., the "objective" material base—necessarily bounds what can be "subjectively" perceived.

- 35 The same insight could also be framed as a "background variable," albeit one that delivers its substantive effects at the intervening level, insofar as every interstate dyad operates against a backdrop of *some* prospective ODB yet with the specific *realized* technogeographical relative ease of attack/defense only manifesting in particular strategic circumstances.

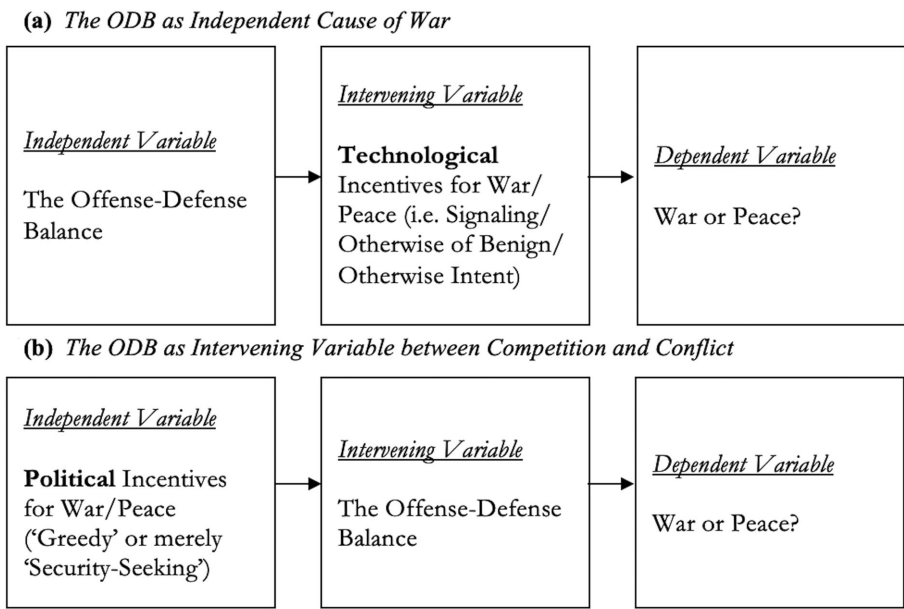


Figure 1. (a) The ODB as independent cause of war. (b) The DOB as intervening variable between competition and conflict.

interstate concept. While ODT has been formulated as an IR theory—and while this article follows that interstate preoccupation—the relative ease of attack/defense is also relevant to terrorists, insurgents, and those who would counter them, i.e., any entity with incentives to advance political goals through offensive operations.

“You Find [the ODB] Where You Least Expect It”: The Relative Ease of Attack and Defense in Offensive Realism

As noted above, the ODB is a problematic tool of intention signaling. This casts doubt on defensive realist ODT’s hopes for escaping the security dilemma via manipulation of the ODB in a defense-favorable direction. But does that mean, as offensive realists conclude, that the ODB does not matter—or even meaningfully exist—at all?

This section will show otherwise. It takes three subordinate theories of offensive realism and demonstrates that they are each dependent on the relative ease of attack and defense. However, that dependence takes the form—and thereby demonstrates the logic—of the recasting of the ODB’s causal role provided above. Specifically, though the ODB does not provide a route to reliable dyadic signaling, the interaction of technology and geography *does* inform at least one side’s war-initiation/-

expansion decision. As such, the ODB can be seen influencing whether interstate competition manifests as actual conflict even *within* the theoretical perspective that rejects its causal significance, thereby demonstrating its analytical value in explanations of war and peace. Since each already has its own evidence base, this section focuses on their theoretical implications for the ODB’s overall merit—especially given the vulnerability of empirical ODB analyses to selection bias, as discussed above—rather than rehashing the sub-theories’ supporting empirics. Nevertheless, brief examples of *deferred* offensives are used to develop each point. Such instances have particular analytical value: because they subsequently *became* manifested offensives, they are available to observe, yet because they were *initially* “non-cases,” the causes of such nonoccurrence can be assessed.

The “SPoW” and the Challenge of Extra-Regional Hegemony

Offensive realism predicts that states will seek as much relative power as is achievable, because only relative power safeguards their security. Logically, therefore, if a state could achieve true global hegemony, it would never again face existential threats from other states because there would never again be states capable of its defeat. “Unbalanced multipolarity”—whereby one systemically significant state enjoys relative power advantage vis-à-vis

the others—is therefore expected to be especially dangerous, since that state will know that it has an opportune window to lock-in its relative power advantage by defeating and defanging potential adversaries (whereas if it waits, adversaries’ relative power may grow and the window subsequently close) (Mearsheimer 2001, 44–45).

Yet if this is the case, why have the two greatest powers of their respective historical epochs—the United Kingdom and United States—not attempted to conquer or otherwise destroy the continental major powers of Eurasia?³⁶ Offensive realism’s explanation for this anomaly is the “stopping power of water” (SPoW) (Mearsheimer 2001, 114–28, 234–66). If projecting military force across large bodies of water is relatively hard, then “off-shore” powers like Britain and America—states that have consolidated power such that they face no military competitors on their own landmass—will simultaneously be hard to conquer while themselves finding it hard to go abroad conquering.³⁷ The continental powers would then be expected to be primarily concerned with the threat posed by each other across their (relatively) easily passable land borders, leaving the offshore power(s) to enjoy a different kind of strategic environment and thus international politics. While the SPoW may render true *global* hegemony unachievable, therefore, it also enables states that can achieve *regional* hegemony on their own landmass to be secure in that outcome.

Obviously, however, “water”—the geographical feature of oceanic moats—only has “stopping power” via its interactions with technology, illustrating that the SPoW is actually an ODB effect (Blagden, Levy, and Thompson 2011, 195–96). There is a material base to this; since

humans cannot live on water without supporting equipment, the same pot of resources that would buy rifles for *two* soldiers to carry across land may only buy a rifle *and* a boat for *one* marine. Yet the boat is itself a technology that changes the strategic salience of the geographic feature. And since technology for crossing water now exists, water can only retain “stopping power” if those seeking to stop adversaries crossing water have the ways and means—i.e., human and physical technology, plus sufficient resources for technology’s procurement—to contest the crossing of water.³⁸

Crucially, moreover, *variation* in technology and its employment causes the strategic salience of the fact that humans cannot live on water to vary too. Aircraft carriers facilitate transoceanic power projection, for example—such technology makes it *relatively* easier to attack via the sea, making water’s “stopping power” *relatively* less—just as anti-ship missiles reduce the relative utility of aircraft carriers, restoring some of the maritime impediment to transoceanic power projection. Intercontinental ballistic missiles dramatically reduced oceanic moats’ security provision, just as assured missile defense would restore it. And if we one day achieve reliable mass teleportation technology, then watery obstacles’ strategic salience may dwindle altogether. In short, the techno-geographical challenge of projecting power overseas—theorized as the SPoW by offensive realism and used to explain the difficulty of obtaining extra-regional hegemony—illustrates the ODB in action.

Two related and iconic cases of deferred overwater offensives highlight this point. Despite routing the British Army in 1940, the Wehrmacht could not immediately follow UK forces across the sea from Dunkirk. Germany had superior relative *power*, but lacked the *capability*—because of techno-geographical conditions—to capitalize on its advantage via a swift expansion of offensive operations, despite temporal uncertainty over how long such advantage would last.³⁹ Consequently, Germany delayed its assault, the UK remained in the war, and Britain

36 Of course, Britain (plus continental allies) “conquered” France to win the Napoleonic Wars, while Britain and America (plus continental allies) “conquered” Germany to win two World Wars. These were not efforts to establish Eurasian continental empires, however. Rather, the UK/United States acted as “offshore balancers,” joining the weaker side to prevent continental powers obtaining the hegemony they enjoy on their own landmasses, with defeated powers’ sovereignty restored following reestablishment of balance (albeit on victor-favorable terms, naturally).

37 At least vis-à-vis other major powers; this obviously says nothing against their capacity for imperial conquest and domination of minor powers beyond/via the sea, which may be enabled—even incentivized—by territorial insularity. It also does not preclude exercise of coercion/dominance against other major powers via ways/means other than conquest, which Washington/London have both done extensively.

38 After all, human agency determines whether such *physical*-geographical obstacles/spaces produce more/less *strategic* separation (Porter 2015), and maritime forces combine variable offensive/defensive potential (Caverley and Dombrowski 2020; Gartzke and Lindsay 2020).

39 Berlin’s internal division over strategic priorities also led to the delay (and eventual nonoccurrence) of Operation SEA LION. Nonetheless, Germany’s lack of sea/air control over the UK littoral—and inability to swiftly establish such control, despite concerted efforts via the Battle of Britain—meant that techno-geographical conditions remained inimical to seaborne invasion. On the

ultimately became the launchpad for the deployment of Allied power against Germany in the West, to the Reich's eventual destruction. Conversely, despite accumulating vastly superior relative power—both generally, and in amphibious forces specifically—for the eventual reconquest of continental Western Europe, and aided by the massive Soviet campaign on their adversary's other flank, the allies were still forced to postpone the Normandy Landings of 1944 by techno-geographical conditions (specifically, the limited capability of then-extant amphibious technologies to operate successfully in hostile maritime conditions against the relative advantages of coastal defenders).⁴⁰ Neither of these related instances is a case of the ODB wholly impeding warfare (one consequence of analyzing deferred offensives is that they must, necessarily, have been part of some overarching campaign)—so again, selection bias is at work. Nonetheless, war *expansion* is the successor of war *initiation*: and in each “half” of this example—deferment of the German-originated assault on Britain, deferment of the British-originated assault on Germany—the techno-geographical infeasibility of conducting offensive operations across water, i.e., the ODB, impeded offensive action (only to be surmounted, in the latter case, by an accumulation of relative power sufficient to eventually overcome such techno-geographical impediments). Since World War II, of course, amphibious technologies have improved—but so too have technologies of maritime denial. The techno-geographical ODB oscillates, in short, to determine just how much “stopping power” oceanic

conditions of sea/air control that Hitler set for SEA LION to proceed—conditions that Germany's power, while initially superior, was insufficient to deliver under prevailing techno-geographical circumstances—see Cox (1977, 160).

- 40 The Allied reinvasion of Continental Europe was postponed from an initial agreement in 1942, then the US proposal for a 1943 assault (codenamed ROUNDUP), before Operations NEPTUNE/OVERLORD finally occurred in 1944—the two-year inception–implementation gap owing to assessments that an even-more-overwhelming force concentration would be necessary before power could be successfully projected/sustained across water. Even in 1944, with an overwhelming force concentration assembled, further deferral was necessitated by maritime conditions too inclement for then-extant amphibious technology—so techno-geographical conditions continued to preclude offensive operations even once the greatest amphibious force in history had been assembled. See Ford and Zaloga (2009, 10–11) and Beevor (2009, 21).

water provides at given strategic moments—meaning that it (1) exists and (2) matters.⁴¹

Note, meanwhile, that this geography/technology interaction carries no necessary implications for signaling or the mitigation of dyadic security dilemmas. Maritime capabilities can be used offensively or defensively, and the capabilities that any side sees as merely necessary for their own protection will be presumed to carry revisionist threat by those among whom political relations already contain reason for conflict; signaling in this domain therefore remains challenging.⁴² The SPoW

- 41 Among major insular powers, Imperial Japan's behavior/fate apparently contrasts the UK/US examples: initially, it *did* “go ashore” to conquer its home region (including other major powers' territories), and later, its oceanic moats did *not* protect it from defeat by great(er) powers *despite* their decision to eschew conquest of the Japanese home islands (Okinawa excepted). Crucially, however, Britain/America have displayed the same impulse to enforce preferred political/economic orders abroad that secure resources/markets and diplomatic subordination—the former as formal empire, the latter as informal hegemonic dominance—but generally in ways that avoided provocation of overwhelming counterbalancing forces (through luck/judgment). Japanese expansion, meanwhile, came against powers with little capacity to contest sea control or subsequent amphibious landing, and thus to utilize water's “stopping power.” Of course, the UK—whose Asian territories were among those seized—*did* have such capacity elsewhere in the world, but was itself operating over water and at great range, with most forces concentrated in Europe against a higher-priority threat, and once Japanese forces were “ashore” in East Asia, they effectively became no less “continental” than British garrisons opposing them (consider the attack on Hong Kong and advance through Malaya). Later, American/allied power-projection to defeat Japan came once Tokyo had lost meaningful ability to contest sea control in the face of overwhelming US power advantages, similarly reducing the defender's capacity to utilize water's “stopping power”—and even then, Washington judged opposed invasion of the main archipelago costly enough to incentivize coercive nuclear use.
- 42 This was as true in the 1910s' Anglo-German *Dreadnought* race as of Chinese/Russian/Iranian responses to US transoceanic power-projection capabilities today (Jervis 1978, 170; Blagden, Levy, and Thompson 2011, 194–95). Indeed, command of the global maritime “commons” is the very condition that has enabled

is a theory, rather, of the relative difficulty of achieving political goals (at acceptable relative cost) through offensive operations—i.e., the ODB—conditioning states’ monadic war-initiation/-expansion decisions, consistent with this article’s argument.⁴³

In short, just as offensive realism pushes the ODB out with one hand, it draws it back in with the other (as the SPoW) (Glaser 2010, 141; 2011, 488). Furthermore, once the salience of oceans as geographical conditioners—via their interactions with technology—of the ODB is recognized, the same must be done for other geographical features. The jungles of Vietnam reduced the offensive capability of US military technology to achieve Washington’s political goals, for example, as did Afghan mountains and Iraqi urban “jungles.” Moreover, returning to the selection bias identified earlier, such instances of observable conflict do not themselves capture the cases where myriad geographical impediments to available technology precluded aggression.

Conventional Blitzkrieg and the Promise of Intra-Regional Hegemony

Geography’s interactions with technology as a conditioner of states’ power-seeking behavior cuts the other way in offensive realism, too. Again, following the security imperative to accrue relative power, offensive realism predicts that the second-best thing to global hegemony is regional hegemony (the military subordination of all other regional states). And just as the SPoW makes the achievement of hegemony beyond one’s landmass challenging, offensive realists *also* identify conditions *within* a landmass that facilitate the achievement of regional hegemony: specifically, the viability of conducting *blitzkrieg* using one’s own conventional forces.

Blitzkrieg—the 1930s Wehrmacht’s operational concept of “lightning war”—involves using combined-arms maneuver warfare that integrates mechanized ground forces (armor and mobile infantry) with supporting fires (artillery and close air support) to prosecute offensive operations with sufficient pace of advance and concentration of force to break a defender’s lines and exploit

such breakages before they can be reinforced (Frieser 2005, 6). It enjoyed famous success in German usage against Poland and France over 1939–1940. However, it is not necessarily unique to a historical moment; any force configuration that allows sufficiently rapid concentration, localized overwhelming of defensive points, and subsequent exploitation of those breakthroughs to achieve decisive offensive gains could carry similar strategic implications (it has been a salient concern more recently than the 1940s as the precision of conventional munitions has increased, for example, given that such precision could be conducive to the concentration of force that blitzkrieg requires (Mearsheimer 1979)).

In that vein, John Mearsheimer—the principal formulator of offensive realism—predicts that conventional deterrence will be particularly hard to sustain, and regional hegemony correspondingly more obtainable for aggressors, when conditions are conducive to blitzkrieg (Mearsheimer 1979; 1983, 30). If a state contemplating aggression is calculating whether it can obtain its political goals through offensive operations at acceptable relative cost, its estimates of whether it can achieve blitzkrieg or will instead get stuck in a costly campaign of attrition will condition its choices. Again, however, this conduciveness/otherwise to blitzkrieg rests on the interaction of technology with geography—and thus the ODB, as reframed in this article.⁴⁴ Within technology, the human aspect is particularly pronounced; to achieve blitzkrieg using the frontier of currently available military materiel, a state must have the doctrine, strategy, and tactics for its employment—just as a state intent on blitzkrieg will try to further develop its technology to serve such operations. An onlooking state would be hard-pressed to assess such human factors, of course—hence the challenges of signaling intent via posture—but for the potential aggressor’s *own* calculations of what its military forces can achieve, such considerations will be pivotal. Geography, meanwhile, is central again. Ground blitzkrieg can only be conducted across land borders—

post-1990 US primacy (Posen 2003), with all the coercion/containment of other states that has entailed.

43 As discussed above, such conditions *can* still convey information: a state inhabiting a techno-geographical situation from which it cannot conduct aggression—e.g., an island state that lacks boats—necessarily “signals” that it cannot conduct aggression over some time horizon. However, it provides no information on whether a boatless island has “greedy” motives that can be implemented after time spent on boat building.

44 Note that Mearsheimer (1983, 203) does not see blitzkrieg’s implications for conventional deterrence as an ODB effect, because Hitler had aggressive motives and sought ways/means to implement them, rather than prevailing technology producing aggression incentives. As argued throughout, however, recognizing aggressive motives as the underlying *cause* of conflict does not preclude an intervening role for techno-geographical conditions—construed to include human technology, i.e., force development/employment—in determining the *feasibility* (otherwise) of successful offensive operations, as they did for Germany over 1939–1940.

given the SPoW—and only on suitable terrain.⁴⁵ Of course, “suitable” terrains have expanded with technological development (e.g., it became operationally feasible in deserts once internal combustion engines acquired adequate sand filters), just as other technological innovations lessened the conduciveness of once-optimal ground (e.g., advances in man-portable anti-tank weaponry reduced armor’s strengths against infantry on agricultural plains). And some future technology may enable combined arms maneuver with sufficient speed/concentration in—say—mountains or jungles. Nevertheless, states’ monadic war-initiation/-expansion decisions are here again conditioned by the relative ease of attack/defense, understood as technology operating in geographical context. Again, this concedes that *incentives* for aggression are a pre-existing condition for such operations to even be contemplated, and thus that the *causes* of interstate competition lie elsewhere (the security imperative for regional hegemony, in offensive realists’ telling). But whether such competition is manifested as actual conflict depends on at least one party calculating that it can advance its political ends through offensive operations at acceptable relative cost, and here we see that is conditioned by technology and geography even within the paradigm that dismisses the ODB.

Another iconic case of postponed offensive operations illustrates the point. The activation of Operation BARBAROSSA—Germany’s 1941 invasion of the Soviet Union—was deferred from mid-May to late June, largely because of heavy spring rains in Central Europe. Swampy, waterlogged ground and still-swollen rivers impeded tracked vehicles, precluding effective blitzkrieg (Buell et al. 2002, 35–40, 101; Roberts 2009, 136–84). Consequently, Germany achieved fewer operational objectives than hoped before the Russian winter, with important consequences for the whole war. Again, this cannot simply be explained away by differences in relative power, since the Germano-Soviet balance-of-resources did not meaningfully vary between the two dates. What varied, rather, was the techno-geographical feasibility of conducting offensive operations, i.e., the ODB, with such (in)feasibility impeding aggression until the ODB became

more conducive.⁴⁶ Of course, waterlogged ground was unlikely to impede US blitzkrieg against Iraqi forces over 1990–1991—but then prosecuting such maneuver warfare against poorly equipped/trained resistance was easier in open deserts than in Iraqi cities’ congested terrain a decade later. Again, in short, the feasibility of conducting offensive operations at acceptable relative cost and thereby establishing hegemony over a territorial region varies through techno-geographical interactions, i.e., the ODB.

Counterforce Innovation and Strategic Competition under Nuclear Deterrence

Just as the failure of the United Kingdom and United States at the height of their relative power to attempt to destroy potential rivals in continental Eurasia gave offensive realism an analytical problem (“fixed” via the SPoW), so too the continuation of interstate competition over relative power since the advent of nuclear deterrence gives defensive realism an explanatory headache. For if one accepts “nuclear revolution” logic—that the arrival of mutually secure second-strike retaliatory nuclear arsenals gave overwhelming advantage to deterrers, and thereby relegated the balance of conventional power to secondary importance in states’ security calculations (Jervis 1989)—then we might expect to see less continuing competition over relative power than we actually observe (Lieber and Press 2017, 10).

Keir Lieber, a leading offensive-realist critic of ODT, offers an explanation for this seeming anomaly (in collaboration with Daryl Press) (Lieber and Press 2017, 11). For

46 Of course, all such histories are contingent. The particular timing/scale of Central European rains was climatic and seasonal, obviously, but also providential for Soviet defenders, just as blitzkrieg’s 1940 success against France owed much to favorable convergence of (fortuitous) German surprise and Franco-British operational ineffectiveness (May 2009 [2000], 448–64). However, while France could have defended better with superior generalship/proficiency and Germany could have achieved more in the USSR with a plan less vulnerable to weather delays—both themselves manifestations of the human exploitation of technology in geographical context—the basic point is that techno-geographical conditions made blitzkrieg more effective in one context than the other. For even without delays to the initial offensive, Soviet terrain/climate/distance/resource-sparsity meant that effectively instantaneous adversary collapse, before defenders could correct initial mistakes—as seen on the Western Front the previous year—was infeasible.

45 Although naval, air, space, cyber, or nuclear operations could themselves be more/less “blitzkrieg-like,” of course—in terms of aggressors’ achievement of force concentration/breakthrough/exploitation versus defenders’ efforts to thwart them—depending on prevailing interactions of human/physical technology and geography.

stable nuclear deterrence to hold, nuclear weapons must not only exist, but must also be reliably survivable and deliverable following an attempted disarming first strike: the “secure second-strike” criterion. Absent such conditions, an aggressor need not be deterred, because their offensive operations will remove their adversary’s ability to strike back. And crucially, technology—when backed by sufficient resources for its procurement, i.e., aggregate power—may provide a route for states’ potential foes to undermine the security of their adversary’s second-strike forces, and thereby break out of the mutual vulnerability that holds their own security at risk. This is hardly a new condition, of course; throughout the nuclear age, states have striven for the counterforce capability to locate and disarm adversaries’ nuclear arsenals, in the hope of lessening their own vulnerability (Long and Green 2015). Balances of technology and resources have been central to those efforts. Nonetheless, Lieber and Press (2006, 2017) contend that recent surveillance/targeting innovations have brought the contemporary United States closer than ever to being able to disarm its adversaries of their nuclear forces, and thereby escape the vulnerability that deters certain US strategic options.

The possibility of counterforce innovation undermining nuclear deterrence explains the continuing need to compete for relative power even in a world of nuclear deterrence, on this telling. For such power provides the relative resources that may allow both the location/destruction of adversaries’ nuclear forces, *and* the resources that enable investment and innovation to shield one’s own nuclear arsenal and thereby preserve one’s own deterrent. Accordingly, it can again be seen as a supportive sub-theory of offensive realism—in line with Lieber’s own offensive realist critique of ODT—explaining the continued imperative to seek more relative power even in a world of nuclear deterrence.

Again, however, counterforce innovation and the threat it may pose to second-strike retaliatory nuclear arsenals’ security is fundamentally about the interactions between technology and geography (Segal 1986) in determining the relative ease of attack and defense—specifically, the relative ease of attacking versus defending nuclear forces and potential aggressors’ associated calculation of whether to be deterred by such forces. The protection of nuclear forces inside hardened silos/tunnels is utilization of geography to secure one technology from another—utilization that has been rendered less effective by technological advances in reconnaissance, targeting, and penetration. The dispersal/concealment of nuclear forces using land-mobile launchers is similarly a technological exploitation of geography using an appropriately adapted technology—the effectiveness of

which varies with context (it has better prospects in vast, sparsely populated Russia than compact, densely populated Britain). And the most assured current vehicle for nuclear survivability and thus retaliatory credibility, the ballistic missile submarine, owes its concealment to a techno-geographical interaction: specifically, the material propensity of water (in oceanic volumes) to absorb/disperse electro-magnetic radiation, rendering submerged objects undetectable by heat/light-reliant sensors (Mendenhall 2018).⁴⁷

Taken together, therefore, counterforce innovation—anything that enhances detection, localization, and prosecution of adversaries’ nuclear forces, such as improved silo penetration, launch site detection, or submarine tracking—represents human and physical technology interacting in geographical context to determine the feasibility of attacking and neutralizing such forces. And insofar as states’ war-initiation/-expansion decisions will be conditioned by the feasibility of achieving political ends at acceptable relative cost through offensive operations, calculating whether an adversary’s nuclear arsenal can be destroyed through a first strike is central to the decision of whether or not to be deterred from one’s preferred course of action. Indeed, the risk that nuclear deterrence may fail and offensive war become more likely is precisely the concern that Lieber and Press’s analyses of US counterforce improvements caution against. We only have two instances so far—both in August 1945—of states detonating atomic weapons against an adversary, so this sub-theory is mercifully short of deferred-offensive case studies. However, past advances in counterforce capabilities have been accompanied by more confrontational policies, increasing the risk of nuclear escalation, and a reduced willingness to be deterred as offensive operations seem to offer greater prospects for advancing political goals at acceptable relative cost—just as Lieber and Press caution of today.⁴⁸ Accordingly,

47 Properties that are easier to utilize if you have, say, Britain’s ready access to the deep North Atlantic than China’s shallow, congested littoral seas.

48 US counterforce advances vis-à-vis the nascent Soviet atomic arsenal over 1950–1952 resulted by 1953 in increasingly confrontational US policies across various domains as Washington estimated that it could reduce adversary retaliation to potentially tolerable levels by striking first if required, and therefore need not be deterred from pursuing certain other policy goals (especially given that this window of opportunity was likely impermanent) (Trachtenberg 1988/1989). By the latter 1960s, however, US policymakers had to accept—with dismay, admittedly, and while continuing efforts to

we again see the ODB at work even in the paradigm that dismisses its importance: not as an intent signal, but as an input to states' calculus of whether they possess the capability to achieve political ends through offensive action.

Conclusion

The relative ease of attack and defense is central to the most pressing concerns of contemporary security studies, just as it has always been. From the Western Pacific to Eastern Europe, from hardening computer systems to protecting nuclear forces, those who fear war—as all should—hope that those with motives for aggression will choose not to act upon them. Potential aggressors' assessments of the relative efficacy of attack and defense will be central to that choice.

IR scholarship has conceptualized this “relative ease” calculation as the ODB. The ODB has, in turn, been used as the basis for ODT: various theses that selection of a defense-favorable posture can enable signaling of non-revisionist intent, and thereby provide an escape from the tragic dynamics of mutual threat and unwanted conflict encapsulated in the security dilemma. Yet signaling intent via force posture choices is unreliable, given aggressors' incentives to misrepresent themselves as defensive before bending existing forces to offensive ends, as even ODT's foundational formulator observes (Jervis 2011, 420).⁴⁹

Fortunately, however, we need not throw the intuitively compelling baby out with the theoretically circumspect bathwater. That the ODB is a compromised tool of intention signaling does not mean that it is

reduce vulnerability—that American counterforce capabilities were no longer sufficient to promise adequately mitigated retaliation, given growth/hardening of the Soviet arsenal, drastically raising the expected cost of US offensive operations. In short, techno-geographical conditions—plus sufficient resources on each side for technology's procurement, obviously—thus produced increasingly mutual deterrence and associatedly less confrontational behavior (before both sides' intensified quest for nuclear superiority through the 1970s (Green 2020, 7) contributed to the renewed confrontationalism of the latter Cold War). For background, see Lieber and Press (2006, 33).

49 As noted, difficulties of signaling benign intent via the ODB do not necessarily preclude *other* foreign-policy reassurance measures (Kydd 1997). Moreover, as discussed, absences of deployable forces *do* (obviously) signal an inability to attack within a given time horizon, even if they do not communicate motives or correspondingly remove fear of others' power.

nonexistent or unimportant. On the contrary, the relative ease of attack and defense—a product of technology, both human and physical, interacting with geographical context—conditions states' assessment of their own prospects for achieving political goals at acceptable relative cost through offensive military action. As such, the ODB can be understood as one of the two contributors to states' contextual military *capability*—a term that means the ability to achieve certain effects in a given context, and of which technology in a given geographical environment is therefore a necessary component—alongside aggregate resources for the procurement/supply of forces. The crucial difference is that others' resource base can be estimated with some confidence whereas the future defensiveness/otherwise of others' posture is harder to assuredly judge. It is therefore a misnomer to debate whether the ODB is an independent variable in explanations of war or simply trivial, the fault line over which defensive and offensive realism come to loggerheads on this subject. Rather, it is an *intervening* variable that influences whether *incentives* for aggression—which come from the political pressures of a competitive international system—are manifested as actual conflict. In this, it does not *need* to be a reliable tool of dyadic signaling. Instead, it need only influence the *monadic* war-initiation and/or war-expansion decisions of those who *already* have political motives for the defeat of another. For if no state concludes that it can advance political goals through offensive action at acceptable relative cost, thanks to the confluence of technology with geographical context, then there will be no fighting, regardless of whether either side trusts the other's professed intentions.

Examining the role of the ODB in three sub-theories of offensive realism—the “stopping power of water” as an obstacle to extra-regional hegemony, the conditions for conventional blitzkrieg as a facilitator of intra-regional hegemony, and counterforce innovation as an explanation of continued power-seeking even in the presence of nuclear deterrence—illustrates the merit of this conceptual recasting. For even in the paradigm that rejects the possibility of modifying security competition by signaling nonaggressive intent, we see calculations of the techno-geographical feasibility of achieving political ends through offensive operations conditioning states' war-initiation decisions. Indeed, despite its prediction that all states will be “primed for offense” by the pressures of anarchic system, offensive realism admits that most states refrain from aggression most of the time (Mearsheimer 2001, 3, 37–40). The relative ease of attack and defense is central to such choices, as offensive realism's own subordinate theories demonstrate; states'

decisions over whether to strike now or continue to exercise restraint—even in the face of strong incentives to harm an adversary—ultimately rest on monadic estimations of their own prospects for successful aggression. As one offensive realist concedes, “the offense-defense balance affects the likelihood that certain policies will be adopted, not what those policies indicate about states’ intentions” (Rosato 2014/2015, 70 (n.100))—and yet, while signaling intentions via the ODB may indeed be a vain hope, that is not what actually matters most for international security. What matters, rather, is whether the international competition that such intentions beget descends into violent conflict (i.e., the “policies [that] will be adopted”)—and as such positions admit, the ODB is central to such choices.

The ODB thus remains an important consideration in both the analysis and making of security policy—that is, for assessments of when competition tips over into conflict, and for purposive efforts to prevent such outcomes—even as we also recognize that the base causes of war lie elsewhere. For scholars, conceptualizing the ODB as an intervening variable will be crucial as we seek to augment recent work on power shifts’ implications for interstate competition with further specificity over when such competition descends into actual fighting.⁵⁰ Notably, as discussed in footnote 31, there are signals big enough to convey no ability (and thus no intent) to conduct aggression, specifically if you have no forces available for offensive operations at a given place-time—but crucially, such signals do not give others reason to fear your power less in future (not to mention that they are also perilous to make), meaning that monadic calculations of aggression feasibility/otherwise will remain central to war acceptance/avoidance decisions. For policymakers seeking to preserve their states’

security in an era of waning US unipolarity, meanwhile, attempts to signal benign intent *via* the ODB and thereby lower the overall level of competition may well fail. But it is still possible to *use* the ODB to bolster peace by affecting potential adversaries’ calculations of (1) whether they *can* achieve political goals via aggression at acceptable relative cost and (2) whether they *need* to strike first in a crisis (because of perceived disadvantages to moving second). In short, manipulation of the ODB is central to the establishment and preservation of deterrence; discernment of *other* states’ future intentions via their force posture choices may not be possible, but status quo states can at least configure their *own* strategic postures to minimize *both* sides’ first-strike concerns. And if no party sees value in striking first, then ultimately there will be no war, however strong the underlying hostility/aggression incentives. For all of its seeming theoretical abstraction and intramural scholasticism, in short, this refined understanding of the ODB will be of value to both the theory and practice of international security as we attempt to manage a post-unipolar future.

Acknowledgments

I thank Kanti Bajpai, Stephen Biddle, David Edelstein, Amalia Feld, Mathias Frendem, Charles Glaser, Brendan Green, Jacqueline Hazelton, Paul van Hooft, Kelly Kadera, Keir Lieber, Susan Martin, John Mearsheimer, Elizabeth Mendenhall, Helena Mills, Evan Montgomery, Glenn Palmer, Joseph Parent, Patrick Porter, Daryl Press, Sebastian Rosato, John Schuessler, Joshua Shiffrin, Duncan Snidal, Simona Raluca Soare, participants in numerous conferences/workshops/etc, and *JoGSS*’ editors and reviewers for their invaluable feedback. Of course, all errors remain my own. I also thank the UK Economic and Social Research Council [Grant Number ES/H015906/1] for its financial support of the doctorate from which this paper originated.

References

- Achen, Christopher H., and Duncan Snidal. 1989. “Rational Deterrence Theory and Comparative Case Studies.” *World Politics* 41 (2): 143–69.
- Adams, Karen Ruth. 2003/2004. “Attack and Conquer? International Anarchy and the Offense–Defense–Deterrence Balance.” *International Security* 28 (3): 45–83.
- Becker, Gary S. 1993. *Human Capital: A Theoretical and Empirical Analysis*, 3rd ed. Chicago, IL: University of Chicago Press.
- Beckley, Michael. 2018. *Unrivaled: Why America Will Remain the World’s Sole Superpower*. Ithaca, NJ: Cornell University Press.
- Bevor, Antony. 2009. *D-Day: The Battle for Normandy*. New York: Viking.

50 Edelstein (2017, 2), for example, seeks to identify conditions under which pre-existing powers “strangle [rising rivals] in the cradle”; Shiffrin (2018, 2), meanwhile, assesses circumstances in which rising states “go for the jugular” by seeking to accelerate declining powers’ fall. Whether either such strategy leads to open conflict rests, however, on whether either party sees opportunities to improve their overall strategic position through resort to offensive military operations—and thus, the ODB. Indeed, one of Shiffrin’s two variables (2018, 13–41)—alongside structural power distribution—in determining rising-power predation is “military posture,” i.e., both sides’ geographically contextualized prospects for advancing interests via aggression. This can be distilled, essentially, as the ODB.

- Betts, Richard K. 1999. "Must War Find a Way? A Review Essay." *International Security* 24 (2): 166–98.
- . 2002. "The Soft Underbelly of American Primacy: Tactical Advantages of Terror." *Political Science Quarterly* 117 (1): 19–36.
- Biddle, Stephen. 2001. "Rebuilding the Foundations of Offense–Defense Theory." *Journal of Politics* 63 (3): 741–74.
- Blagden, David. 2018. "Realism, Uncertainty, and the Security Dilemma: Identity and the Tantalizing Promise of Transformed International Relations." In *Constructivism Reconsidered: Past, Present, and Future*, edited by Mariano E. Bertucci, Jarrod Hayes and Patrick James, 197–226. Ann Arbor, MI: University of Michigan Press.
- . 2020. "Deterring Cyber Coercion: The Exaggerated Problem of Attribution." *Survival* 62 (1): 131–48.
- Blagden, David W., Jack S. Levy, and William R. Thompson. 2011. "Sea Powers, Continental Powers, and Balancing Theory." *International Security* 36 (2): 190–202.
- Boulding, Kenneth E. 1962. *Conflict and Defense: A General Theory*. New York: Harper.
- Brooks, Stephen G. 2005. *Producing Security: Multinational Corporations, Globalization, and the Changing Calculus of Conflict*. Princeton, NJ: Princeton University Press.
- Buell, Thomas B., Clifton R. Franks, John A. Hixson, David R. Mets, Bruce R. Pirnie, James F. Jansone (Jr.), Thomas R. Stone, and Thomas E. Greiss. 2002. *The Second World War: Europe and the Mediterranean*. New York: Square One (for the U.S. Military Academy).
- Caverley, Jonathan D., and Peter Dombrowski. 2020. "Cruising for a Bruising: Maritime Competition in an Anti-Access Age." *Security Studies* 29 (4): 671–700.
- Clausewitz, Carl von. 1989 [1832]. *On War*. Princeton, NJ: Princeton University Press.
- Copeland, Dale C. 2000. *The Origins of Major War*. Ithaca, NY: Cornell University Press.
- . 2011. "Rationalist Theories of International Politics and the Problem of the Future." *Security Studies* 20 (3): 441–50.
- Cox, Richard. 1977. *Operation Sea Lion*. New York: Presidio.
- Cunningham, Fiona S., and M. Taylor Fravel. 2015. "Assuring Assured Retaliation: China's Nuclear Posture and U.S.–China Strategic Stability." *International Security* 40 (2): 7–50.
- Davis Jr., James W., Bernard I. Finel, Stacie E. Goddard, Stephen Van Evera, Charles L. Glaser, and Chaim Kaufmann. 1998/1999. "Taking Offense at Offense–Defense Theory." *International Security* 23 (3): 179–206.
- Debs, Alexandre, and Nuno P. Monteiro. 2014. "Known Unknowns: Power Shifts, Uncertainty, and War." *International Organization* 68 (1): 1–31.
- Edelstein, David M. 2017. *Over the Horizon: Time, Uncertainty, and the Rise of Great Powers*. Ithaca, NY: Cornell University Press.
- Fearon, James D. 2018. "Cooperation, Conflict, and the Costs of Anarchy." *International Organization* 72 (3): 523–59.
- Ford, Ken, and Steven J. Zaloga. 2009. *Overlord: The D-Day Landings*. Oxford: Osprey.
- Frieser, Karl-Heinz. 2005. *The Blitzkrieg Legend: The 1940 Campaign in the West*. Annapolis, MD: U.S. Naval Institute Press.
- Futter, Andrew. 2016. "War Games Redux? Cyberthreats, US–Russian Strategic Stability, and New Challenges for Nuclear Security and Arms Control." *European Security* 25 (2): 163–80.
- Garfinkel, Ben, and Allan Dafoe. 2019. "How Does the Offense–Defense Balance Scale?" *Journal of Strategic Studies* 42 (6): 736–63.
- Gartzke, Erik, and Jon Lindsay. 2015. "Weaving Tangled Webs: Offense, Defense, and Deception in Cyberspace." *Security Studies* 24 (2): 316–48.
- . 2020. "The Influence of Sea Power on Politics: Domain- and Platform-Specific Attributes of Material Capabilities." *Security Studies* 29 (4): 601–36.
- Gilpin, Robert. 1981. *War and Change in World Politics*. Cambridge: Cambridge University Press.
- Glaser, Charles L. 1994/1995. "Realists as Optimists: Cooperation as Self-Help." *International Security* 19 (3): 50–90.
- . 2010. *Rational Theory of International Politics: The Logic of Competition and Cooperation*. Princeton, NJ: Princeton University Press.
- . 2011. "Defending RTIP, without Offending Unnecessarily." *Security Studies* 20 (3): 469–89.
- Glaser, Charles L., and Chaim Kaufmann. 1998. "What Is the Offense–Defense Balance and Can We Measure It?" *International Security* 22 (4): 44–82.
- Goddard, Stacie E. 2018. *When Right Makes Might: Rising Powers and World Order*. Ithaca, NY: Cornell University Press.
- Goldstein, Avery. 2013. "First Things First: The Pressing Danger of Crisis Instability in U.S.–China Relations." *International Security* 37 (4): 49–89.
- Gompert, David C., and Martin Libicki. 2014. "Cyber Warfare and Sino-American Crisis Instability." *Survival* 56 (4): 7–22.
- Gray, Colin S. 1975. "New Weapons and the Resort to Force." *International Journal* 30 (2): 238–58.
- . 1993. *Weapons Don't Make War: Policy, Strategy, and Military Technology*. Lawrence, KS: University Press of Kansas.
- Green, Brendan Rittenhouse. 2020. *The Revolution that Failed: Nuclear Competition, Arms Control, and the Cold War*. Cambridge: Cambridge University Press.
- Hamilton, Eric J., and Brian C. Rathbun. 2013. "Scarce Differences: Toward a Material and Systemic Foundation for Offensive and Defensive Realism." *Security Studies* 22 (3): 436–65.
- Hopf, Ted. 1991. "Polarity, the Offense–Defense Balance, and War." *American Political Science Review* 85 (2): 475–93.
- Jervis, Robert. 1978. "Cooperation under the Security Dilemma." *World Politics* 30 (2): 167–214.
- . 1989. *The Meaning of the Nuclear Revolution: Statecraft and the Prospect of Armageddon*. Ithaca, NY: Cornell University Press.
- . 2001. "Was the Cold War a Security Dilemma?" *Journal of Cold War Studies* 3 (1): 36–60.
- . 2011. "Dilemmas about Security Dilemmas." *Security Studies* 20 (3): 416–23.
- . 2017 [1976]. *Perception and Misperception in International Politics*. Princeton, NJ: Princeton University Press.

- Kydd, Andrew. 1997. "Sheep in Sheep's Clothing: Why Security Seekers Do Not Fight Each Other." *Security Studies* 7 (1): 114–55.
- Levy, Jack S. 1984. "The Offensive/Defensive Balance of Military Technology: A Theoretical and Historical Analysis." *International Studies Quarterly* 28 (2): 219–38.
- Lieber, Keir A. 2000. "Grasping the Technological Peace: The Offense–Defense Balance and International Security." *International Security* 25 (1): 71–104.
- . 2005. *War and the Engineers: The Primacy of Politics over Technology*. Ithaca, NY: Cornell University Press.
- . 2007. "The New History of World War I and What It Means for International Relations Theory." *International Security* 32 (2): 155–91.
- . 2011. "Mission Impossible: Measuring the Offense–Defense Balance with Military Net Assessment." *Security Studies* 20 (3): 451–59.
- Lieber, Keir A., and Daryl G. Press. 2006. "The End of MAD? The Nuclear Dimension of U.S. Primacy." *International Security* 30 (4): 7–44.
- . 2017. "The New Era of Counterforce: Technological Change and the Future of Nuclear Deterrence." *International Security* 41 (4): 9–49.
- Lobell, Stephen E. 2010. "Structural Realism/Offensive and Defensive Realism." In *Oxford Research Encyclopedia of International Studies*, edited by Nukhet Sandal. Oxford: Oxford University Press. Accessed 24 March, 2021. <https://doi.org/10.1093/acrefore/9780190846626.013.304>.
- Long, Austin, and Brendan Rittenhouse Green. 2015. "Stalking the Secure Second Strike: Intelligence, Counterforce, and Nuclear Strategy." *Journal of Strategic Studies* 38 (1–2): 38–73.
- Lynn-Jones, Sean M. 1995. "Offense–Defense Theory and Its Critics." *Security Studies* 4 (4): 660–91.
- MacDonald, Paul K., and Joseph M. Parent. 2018. *Twilight of the Titans: Great Power Decline and Retrenchment*. Ithaca, NY: Cornell University Press.
- May, Ernest R. 2009 [2000]. *Strange Victory: Hitler's Conquest of France*. London: I.B. Tauris.
- Mearsheimer, John J. 1979. "Precision-Guided Munitions and Conventional Deterrence." *Survival* 21 (2): 68–76.
- . 1983. *Conventional Deterrence*. Ithaca, NY: Cornell University Press.
- . 2001. *The Tragedy of Great Power Politics*. New York: Norton.
- Mendenhall, Elizabeth. 2018. "Fluid Foundations: Ocean Transparency, Submarine Opacity, and Strategic Nuclear Stability." *Journal of Military and Strategic Studies* 19 (1): 119–58.
- Montgomery, Evan Braden. 2006. "Breaking Out of the Security Dilemma: Realism, Reassurance, and the Problem of Uncertainty." *International Security* 31 (2): 151–85.
- . 2014. "Contested Primacy in the Western Pacific: China's Rise and the Future of U.S. Power Projection." *International Security* 38 (4): 115–49.
- . 2016. *In the Hegemon's Shadow: Leading States and the Rise of Regional Powers*. Ithaca, NY: Cornell University Press.
- Mount, Adam. 2018. "Trump's Troubling Nuclear Plan." *Foreign Affairs*, February 2. Accessed April 30, 2019. <https://www.foreignaffairs.com/articles/2018-02-02/trumps-troubling-nuclear-plan>.
- Porter, Patrick. 2015. *The Global Village Myth: Distance, War, and the Limits of Power*. Washington, DC: Georgetown University Press.
- Posen, Barry R. 2003. "Command of the Commons: The Military Foundation of U.S. Hegemony." *International Security* 28 (1): 5–46.
- Questa, George H. 2003 [1977]. *Offense and Defense in the International System*, 3rd ed. New Brunswick: Transaction Publishers.
- Ripsman, Norrin M., Jeffrey W. Taliaferro, and Steven E. Lobell. 2016. *Neoclassical Realist Theory of International Politics*. Oxford: Oxford University Press.
- Roberts, Andrew. 2009. *The Storm of War: A New History of the Second World War*. London: Penguin.
- Rosato, Sebastian. 2005. "Explaining the Democratic Peace." *American Political Science Review* 99 (3): 467–72.
- . 2014/2015. "The Inscrutable Intentions of Great Powers." *International Security* 39 (3): 48–88.
- Rovner, Joshua. 2017. "Two Kinds of Catastrophe: Nuclear Escalation and Protracted War in Asia." *Journal of Strategic Studies* 40 (5): 696–730.
- Schelling, Thomas C. 2009. "A World without Nuclear Weapons?" *Daedalus* 138 (4): 124–29.
- Schweller, Randall L. 2011. "Rational Theory for a Bygone Era." *Security Studies* 20 (3): 460–68.
- Segal, Gerald. 1986. "Nuclear Strategy: The Geography of Stability." *Political Geography Quarterly* 5 (4(1)): S37–47.
- Shiffrinson, Joshua R. Itzkowitz. 2018. *Rising Titans, Falling Giants: How Great Powers Exploit Power Shifts*. Ithaca, NY: Cornell University Press.
- Shimshoni, Jonathan. 1990/1991. "Technology, Military Advantage, and World War I: A Case for Military Entrepreneurship." *International Security* 15 (3): 187–215.
- Shlapak, David A., and Michael W. Johnson. 2016. *Reinforcing Deterrence on NATO's Eastern Flank: Wargaming the Defense of the Baltics*. Santa Monica, CA: RAND.
- Slayton, Rebecca. 2016/2017. "What Is the Cyber Offense–Defense Balance? Conceptions, Causes, and Assessment." *International Security* 41 (3): 72–109.
- Snyder, Jack, and Keir A. Lieber. 2008. "Defensive Realism and the 'New' History of World War I." *International Security* 33 (1): 174–94.
- Solow, Robert M. 1956. "A Contribution to the Theory of Economic Growth." *Quarterly Journal of Economics* 70 (1): 65–94.
- Starr, Harvey. 2005. "Territory, Proximity, and Spatiality: The Geography of International Conflict." *International Studies Review* 7 (3): 387–406.
- Taliaferro, Jeffrey W. 2000/2001. "Security Seeking under Anarchy: Defensive Realism Revisited." *International Security* 25 (3): 128–61.

- Talmadge, Caitlin. 2017. "Would China Go Nuclear? Assessing the Risk of Chinese Nuclear Escalation in a Conventional War with the United States." *International Security* 41 (4): 50–92.
- Tang, Shiping. 2010. "Offence–Defence Theory: Towards a Definitive Understanding." *Chinese Journal of International Politics* 3 (2): 213–60.
- Trachtenberg, Marc. 1988/1989. "A "Wasting Asset": American Strategy and the Shifting Nuclear Balance, 1949–1954." *International Security* 13 (3): 5–49.
- Trenin, Dmitri. 2018. *Avoiding U.S.–Russia Military Escalation during the Hybrid War*. New York: Carnegie Endowment for International Peace.
- Van Evera, Stephen. 1998. "Offense, Defense, and the Causes of War." *International Security* 22 (4): 5–43.
- . 1999. *Causes of War: Power and the Roots of Conflict*. Ithaca, NY: Cornell University Press.
- Walt, Stephen M. 1987. *The Origins of Alliances*. Ithaca, NY: Cornell University Press.